

**BEFORE THE DEPARTMENT OF  
NATURAL RESOURCES AND CONSERVATION  
OF THE STATE OF MONTANA**

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APPLICATION TO CHANGE WATER	)	
RIGHT NO. 76N 30066124 BY KURT	)	<b>PRELIMINARY DETERMINATION TO</b>
<b>TEDHAMS LIVING TRUST</b>	)	<b>GRANT CHANGE</b>

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On April 25, 2013, Kurt A Tedhams, trustee for the Kurt Tedhams Living Trust (Applicant) submitted Application to Change Water Right No. 76N 30066124 to change Water Right Claim No. 76N 105405 to the Kalispell Regional Office of the Department of Natural Resources and Conservation (Department or DNRC). The Department published receipt of the Application on its website. The Department sent Applicant a deficiency letter under §85-2-302, Montana Code Annotated (MCA), dated October 18, 2013. The Applicant responded with information dated January 16, 2014. The Application was determined to be correct and complete as of May 12, 2014. Waiver of Timeline was received May 27, 2014. An Environmental Assessment for this Application was completed on August 13, 2015.

**INFORMATION**

The Department considered the following information submitted by the Applicant.

Application as filed:

- Form 606
- Storage Addendum for ponds #1 and #2
- Aerial photos with section lines showing historic and proposed place of use
- Aerial photos dated 1940, 1953, 1958 and 1964 showing irrigated place of use
- Aerial photos with section lines showing points of diversion and places of use for Claim 76N 105405 and Permit 76N 38319
- USGS soil map of place of use

Information Received after Application Filed:

- Deficiency response from Applicant dated and received by DNRC January 16, 2014, RE: general discussion of supplemental right 76N 38319 out of the Clark Fork River,

beneficial use calculations, possessory interest, historic use, proposed use and adverse effect.

- 2015 Seepage Testing Results and Volume Request Modification received June 15, 2015
- Flow Rate Addendum dated July 13, 2015

#### Information within the Department's Possession/Knowledge

- 1969 Sanders County Water Resources Survey; USGS Map, Study
- Permit file for supplemental water right 76N 38319 and Claim file 76N 105405
- Irrigation Water Requirements (IWR) for beneficial use

The Department has fully reviewed and considered the Environmental Assessment and evidence and argument submitted with this Application and **preliminarily determines** pursuant to the Montana Water Use Act (Title 85, chapter 2, parts 3 and 4, MCA) as follows.

### **WATER RIGHTS TO BE CHANGED**

#### FINDINGS OF FACT

1. The Applicant seeks to change Statement of Claim 76N 105405. This right is for sprinkler/flood irrigation of 115 acres at a rate of 418.48 GPM per year up to 332.8 AF with a claimed priority date of October 9, 1888. Period of diversion is May 1 through October 31 of each year. Point of diversion is a headgate in Mosquito Creek, which is west of the place of use in the SE<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> of Section 14, Township 22N, Range 30W, Sanders County. Place of use is SE<sup>1</sup>/<sub>4</sub> of Section 14 and NE<sup>1</sup>/<sub>4</sub> of Section 23 all in Township 22N, Range 30W, Sanders County approximately 5.5 miles northwest of Thompson Falls and adjacent to the Clark Fork River on the east.
2. There is a Provisional Permit, 76N 38319, from the Clark Fork River for 610 GPM (1.36 CFS) up to 250.43 AF annually for irrigation and stock use on 100 acres (70 acres in the SE<sup>1</sup>/<sub>4</sub> of Section 14, Township 22N, Range 30W and 30 acres in the N<sup>1</sup>/<sub>2</sub>NE<sup>1</sup>/<sub>4</sub> of Section 23, Township 22N, Range 30W) with a period of diversion of April 15 to October 15 with approximately 82.95 acres of overlapping places of use with Claim 76N 105405.

3. The headgate from Mosquito Creek and a portion of the conveyance system is also used for three additional Claims of the Applicant and two Claims for a neighbor, Matthews, whose place of use is north of the Applicants.

W.R. NO.	FLOW	VOLUME	PURPOSE	PERIOD OF USE	PLACE OF USE	POINT(S) OF DIVERSION	PRIORITY DATE
76N 105404 (Tedhams)	%	%	Stock	1/1 – 12/31	SWNW 28-20N-26W	**SENWSW 14-22N-30W	10/9/1888
76N 105406 (Tedhams)	10 GPM	1.5 AF	Domestic	1/1 – 12/31	NWSWSE 14-22N-30W	**SENWSW 14-22N-30W	10/9/1888
76N 105407 (Tedhams)	%	%	Fish and Wildlife ponds	1/1 – 12/31	SWSE & SWNWSE 14-22N-30W	**SENWSW 14-22N-30W	10/9/1888
76N 27767 (Matthews)	%	%	Stock	1/1 – 12/31	SW & SE & NE 14-22N-30W	**NWSESW 14-22N-30W	2/12/1942
76N 27766 (Matthews)	55 GPM	24.53 AF	Irrigation	6/1 – 9/9	S2NE 14-22N-30W	**NWSESW 14-22N-30W	12/31/1905

% = amounts are based on standards of Adjudication and have been zeroed out

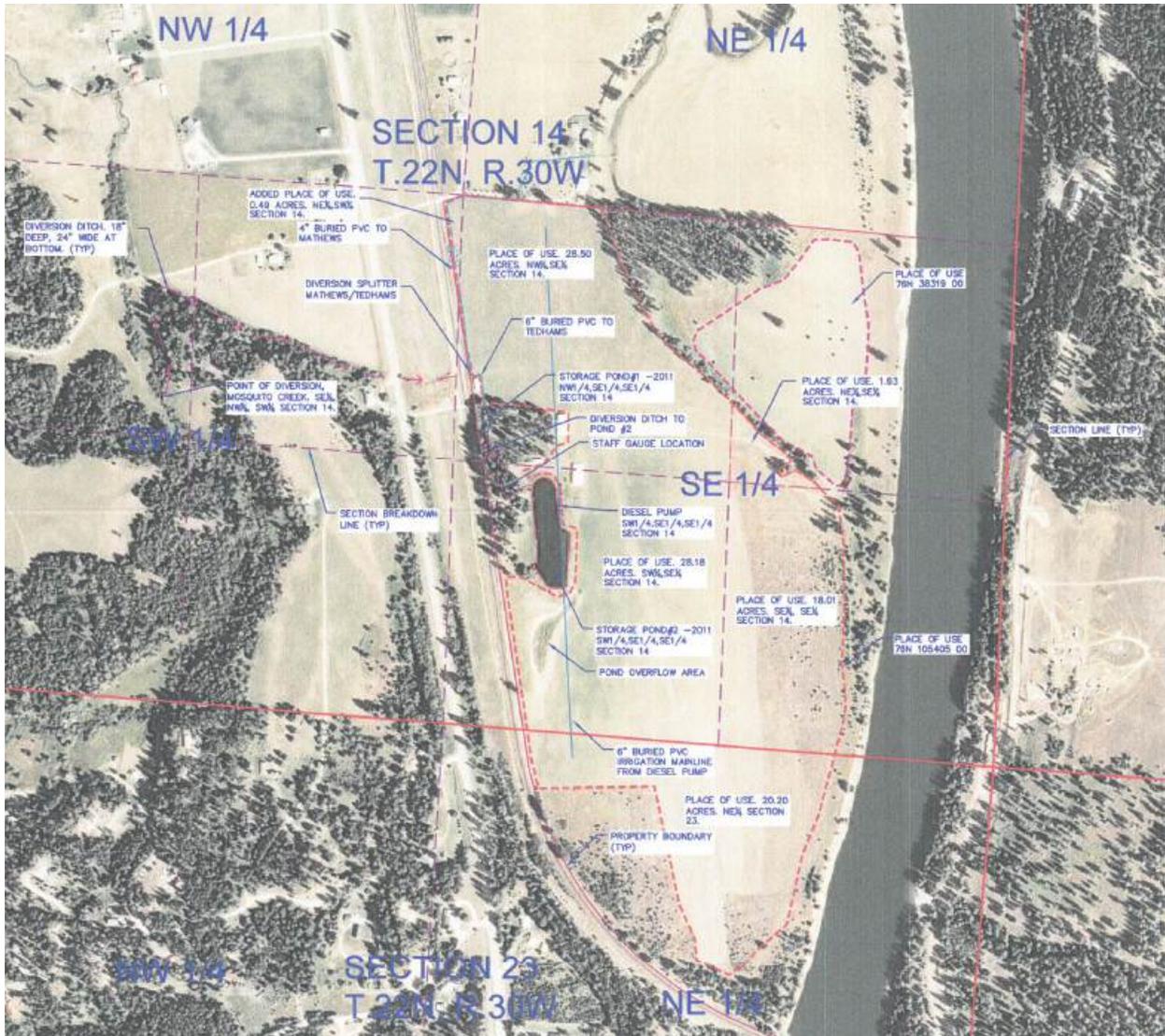
\*\* = Claimants have used two different legal land descriptions but both describe the shared POD

### **CHANGE PROPOSAL**

#### **FINDINGS OF FACT**

4. Applicant proposes to add two ponds as storage and secondary diversions for a sprinkler irrigation system for irrigation on 107.31 acres of the historic place of use from Statement of Claim 76N 105405. Conveyance to Applicant’s place of use has not changed. Source of water will still be Mosquito Creek, which is located to the west of the place of use.

5. Irrigation requirements of the historic place of use will be shared with Provisional Permit 76N 38319 from the Clark Fork River, which is to the east of the place of use. This permit also supplies a bench area of 30 acres of irrigated land not covered by claim 76N 105405.



6. Measurement conditions will be a part of this change application. Applicant will measure water below the shared headgate on Mosquito Creek and will also measure flow between pond #1 (North pond) and pond #2 (South pond). The measuring devices in the ditches are proposed to be repleg flumes capable of measuring flows between 50 and 1,000 GPM. Flow and volume measurements will then be submitted to the department annually.

THE APPROPRIATOR SHALL INSTALL A DEPARTMENT APPROVED MEASUREMENT DEVICE AT A POINT IN THE CONVEYANCE APPROVED BY THE DEPARTMENT. WATER MUST NOT BE DIVERTED UNTIL THE REQUIRED MEASURING DEVICE IS IN PLACE AND OPERATING. ON A FORM PROVIDED BY THE DEPARTMENT, THE APPROPRIATOR SHALL KEEP A WRITTEN *MONTHLY* RECORD OF THE FLOW RATE AND VOLUME OF ALL WATER DIVERTED, INCLUDING THE PERIOD OF TIME. RECORDS SHALL BE SUBMITTED BY JANUARY 31 OF EACH YEAR AND UPON REQUEST AT OTHER TIMES DURING THE YEAR. FAILURE TO SUBMIT REPORTS MAY BE CAUSE FOR REVOCATION OF A PERMIT OR CHANGE. THE RECORDS MUST BE SENT TO THE WATER RESOURCES REGIONAL OFFICE. THE APPROPRIATOR SHALL MAINTAIN THE MEASURING DEVICE SO IT ALWAYS OPERATES PROPERLY AND MEASURES FLOW RATE AND VOLUME ACCURATELY.

### **§85-2-402, MCA, CRITERIA**

#### **GENERAL CONCLUSIONS OF LAW**

7. An applicant in a change proceeding must affirmatively prove all of the criteria in §85-2-402, MCA. Under this Preliminary Determination, the relevant change criteria in §85-2-402(2), MCA, are:

(2) Except as provided in subsections (4) through (6), (15), and (16) and, if applicable, subject to subsection (17), the department shall approve a change in appropriation right if the appropriator proves by a preponderance of evidence that the following criteria are met:

(a) The proposed change in appropriation right will not adversely affect the use of the existing water rights of other persons or other perfected or planned uses or developments for which a permit or certificate has been issued or for which a state water reservation has been issued under part 3.

(b) Except for a change in appropriation right for instream flow to protect, maintain, or enhance streamflows to benefit the fishery resource pursuant to [85-2-436](#) or a temporary change in appropriation right authorization to maintain or enhance streamflows to benefit the fishery resource pursuant to [85-2-408](#) or a change in appropriation right to instream flow to protect, maintain, or enhance streamflows pursuant to [85-2-320](#), the proposed means of diversion, construction, and operation of the appropriation works are adequate.

(c) The proposed use of water is a beneficial use.

(d) Except for a change in appropriation right for instream flow to protect, maintain, or enhance streamflows to benefit the fishery resource pursuant to [85-2-436](#) or a temporary change in appropriation right authorization pursuant to [85-2-408](#) or a change in appropriation right to instream flow to protect, maintain, or enhance streamflows pursuant to [85-2-320](#), the applicant has a possessory interest, or the written consent of the person with the possessory interest, in the property where the water is to be put to beneficial use or, if the proposed change involves a point of diversion, conveyance, or place of use on national

forest system lands, the applicant has any written special use authorization required by federal law to occupy, use, or traverse national forest system lands for the purpose of diversion, impoundment, storage, transportation, withdrawal, use, or distribution of water.

(e) If the change in appropriation right involves salvaged water, the proposed water-saving methods will salvage at least the amount of water asserted by the applicant.

The Department has jurisdiction to approve a change if the appropriator proves the applicable criteria in § 85-2-402, MCA. The requirements of Montana's change statute have been litigated and upheld in Matter of Application for Change of Appropriation Water Rights Nos. 101960-41S and 101967-41S by Royston (1991), 249 Mont. 425, 816 P.2d 1054, and the applicant has the burden of proof at all stages before the Department and courts. Hohenlohe v. DNRC, 2010 MT 203, ¶ 75; Town of Manhattan v. DNRC, Cause No. DV-09-872C, Montana Eighteenth Judicial District Court, *Order Re Petition for Judicial Review*, (2011) Pg. 8, *aff'd on other grounds*, Town of Manhattan v. DNRC, 2012 MT 81.

8. The burden of proof in a change proceeding by a preponderance of evidence is “more probably than not.” Hohenlohe ¶¶ 33, 35.

9. In a change proceeding and in accordance with well-settled western water law, other appropriators have a vested right to have the stream conditions maintained substantially as they existed at the time of their appropriations. Spokane Ranch & Water Co. v. Beatty (1908), 37 Mont. 342, 96 P. 727; ); McDonald v. State (1986), 220 Mont. 519, 722 P.2d 598 (existing water right is the pattern of historic use; beneficial use is the basis measure and the limit); Hohenlohe ¶ 43; Robert E. Beck, 2 Waters and Water Rights § 14.04(c)(1) (1991 edition); W. Hutchins, Selected Problems in the Law of Water Rights in the West 378 (1942); *In the Matter of Application to Change Appropriation Water Right No.41F-31227 by T-L Irrigation Company* (DNRC Final Order 1991)(senior appropriator cannot change pattern of use to detriment of junior); see also Farmers Reservoir and Irr. Co. v. City of Golden, 44 P.3d 241, 245 (Colo. 2002)(“We [Colorado Supreme Court] have stated time and again that the need for security and predictability in the prior appropriation system dictates that holders of vested water rights are entitled to the continuation of stream conditions as they existed at the time they first made their appropriation). This right to protect stream conditions substantially as they existed at the time of appropriations was recognized in the Act in §85-2-401, MCA. An applicant must prove that all

other appropriators can continue to reasonably exercise their water rights under changes in the stream conditions attributable to the proposed change; otherwise, the change cannot be approved.

Montana's change statute reads in part to this issue:

85-2-402. (2) ... the department shall approve a change in appropriation right if the appropriator proves by a preponderance of evidence that the following criteria are met:

(a) *The proposed change in appropriation right will not adversely affect the use of the existing water rights of other persons* or other perfected or planned uses or developments for which a permit or certificate has been issued or for which a state water reservation has been issued under part 3.

....

(13) A change in appropriation right contrary to the provisions of this section is invalid. An officer, agent, agency, or employee of the state may not knowingly permit, aid, or assist in any manner an unauthorized change in appropriation right. A person or corporation may not, directly or indirectly, personally or through an agent, officer, or employee, attempt to change an appropriation right except in accordance with this section

(italics added).

10. Montana's change statute simply codifies western water law.<sup>1</sup> One commentator describes the general requirements in change proceedings as follows:

Perhaps the most common issue in a reallocation [change] dispute is whether other appropriators will be injured because of an increase in the consumptive use of water. Consumptive use has been defined as "diversions less returns, the difference being the amount of water physically removed (depleted) from the stream through evapotranspiration by irrigated crops or consumed by industrial processes, manufacturing, power generation or municipal use." "Irrigation consumptive use is the

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<sup>1</sup> Although Montana has not codified the law in the detail, Wyoming has, and the two states' requirements are virtually the same. Wyo. Stat. § 41-3-104 states:

When an owner of a water right wishes to change a water right ... he shall file a petition requesting permission to make such a change .... The change ... may be allowed provided that the quantity of water transferred ... shall not exceed the amount of water historically diverted under the existing use, nor increase the historic rate of diversion under the existing use, nor increase the historic amount consumptively used under the existing use, nor decrease the historic amount of return flow, nor in any manner injure other existing lawful appropriators.

Colorado follows a similar analysis under its requirement that a "change of water right, ... shall be approved if such change, ... will not injuriously affect the owner of or persons entitled to use water under a vested water right or a decreed conditional water right." §37-92-305(3)(a), C.R.S. E.g., Application for Water Rights in Rio Grande County, 53 P.3d 1165, 1170 (Colo. 2002).

amount of consumptive use supplied by irrigation water applied in addition to the natural precipitation which is effectively available to the plant.”

An appropriator may not increase, through reallocation [change] or otherwise, the actual historic consumptive use of water to the injury of other appropriators. In general, any act that increases the quantity of water taken from and not returned to the source of supply constitutes an increase in historic consumptive use. As a limitation on the right of reallocation, historic consumptive use is an application of the principle that appropriators have a vested right to the continuation of stream conditions as they existed at the time of their initial appropriation.

Historic consumptive use varies greatly with the circumstances of use.

Robert E. Beck, 2 Water and Water Rights at § 14.04(c)(1)(b), pp. 14-50, 51 (1991 edition) (italics added).

In Pueblo West Metropolitan District v. Southeastern Colorado Water Conservancy District (Colo. 1986), 717 P.2d 955, 959, the court held:

[O]nce an appropriator exercises his or her privilege to change a water right ... the appropriator runs a real risk of requantification of the water right based on actual historical consumptive use. In such a change proceeding a junior water right ... which had been strictly administered throughout its existence would, in all probability, be reduced to a lesser quantity because of the relatively limited actual historic use of the right.

See also 1 Wells A. Hutchins, Water Rights and Laws in the Nineteen Western States (1971), at p. 624 (changes in exercise of appropriative rights do not contemplate or countenance any increase in the quantity of water diverted under the original exercise of the right; in no event would an increase in the appropriated water supply be authorized by virtue of a change in point of diversion, place of use, or purpose of use of water); A. Dan Tarlock, Law of Water Rights and Water Resources (2007), at § 5:78 (“A water holder can only transfer the amount that he has historically put to beneficial use.... A water holder may only transfer the amount of water consumed. The increment diverted but not consumed must be left in the stream to protect junior appropriators. Consumption is a function of the evapotranspiration of the appropriator’s crops. Carriage losses are usually added to the amount consumed by the crops.”); § 37-92-301(5), C.R.S. (in proceedings for a reallocation [change], it is appropriate to consider abandonment of the water right); Wyo. Stat. Ann. § 41-3-104.

11. Accordingly, the DNRC in administrative rulings has held that a water right in a change proceeding is defined by actual beneficial use, not the amount claimed or even decreed. E.g., In the Matter of Application for Change Authorization No. G(W)028708-411 by Hedrich/Straugh/Ringer, (DNRC Final Order 1991); In the Matter of Application for Change Authorization No. G(W)008323-g76L by Starkel/Koester, (DNRC Final Order (1992)); In the Matter of Application for Beneficial Water User Permit No 20736-S41H by the City of Bozeman and In the Matter of the Application to Sever or Sell Appropriation Water Right 20737-S41H, Proposal for Decision and Memorandum at pgs. 8-22, adopted by Final Order (January 9, 1985); see McDonald, supra (beneficial use is the measure, limit and basis, irrespective of greater quantity attempted to be appropriated); Quigley v. McIntosh, 110 Mont. 495, 103 P.2d 1067 (amount of water right is actual historic use); Town of Manhattan v. DNRC, Cause No. DV-09-872C, Montana Eighteenth Judicial District Court, Order Re Petition for Judicial Review, (2011) Pgs. 11-12 (proof of historic use is required even when the right has been decreed because the decreed flow rate or volume establishes the maximum appropriation that may be diverted, and may exceed the historical pattern of use, amount diverted or amount consumed through actual use, *citing McDonald*).

12. The Montana Supreme Court recently explained:

An appropriator historically has been entitled to the greatest quantity of water he can put to use. Sayre v. Johnson, 33 Mont. 15, 18, 81 P. 389, 390 (1905). The requirement that the use be both beneficial and reasonable, however, proscribes this tenet. In re Adjudication of Existing Rights to the Use of All Water, 2002 MT 216, ¶ 56, 311 Mont. 327, 55 P.3d 396; see also § 85-2-311(1)(d), MCA. This limitation springs from a fundamental tenet of western water law—that an appropriator has a right only to that amount of water historically put to beneficial use—developed in concert with the rationale that each subsequent appropriator “is entitled to have the water flow in the same manner as when he located,” and the appropriator may insist that prior appropriators do not affect adversely his rights. Spokane Ranch & Water Co. v. Beatty, 37 Mont. 342, 351, 96 P. 727, 731 (1908)....

We do not dispute this interrelationship between historic consumptive use, return flow, and the amount of water to which an appropriator is entitled as limited by his past beneficial use.

Hohenlohe v. DNRC, 2010 MT 203, ¶¶ 43, 45; see also Town of Manhattan v. DNRC, Cause No. DV-09-872C, Montana Eighteenth Judicial District Court, *Order Re Petition for Judicial Review*, (2011) Pg. 9.

13. The extent of the historic beneficial use must be determined in a change case. E.g., McDonald; Hohenlohe ¶ 43; Application for Water Rights in Rio Grande County, 53 P.3d 1165, 1170 (Colo. 2002); Santa Fe Trail Ranches Property Owners Ass'n v. Simpson, 990 P.2d 46, 55-57 (Colo.,1999); City of Bozeman (DNRC), *supra* (“the doctrine of historic use gives effect to the implied limitations read into every decreed right that an appropriator has no right to waste water or to otherwise expand his appropriation to the detriment of juniors.”) As a point of clarification, a claim filed for an existing water right in accordance with Mont. Code Ann. § 85-2-221 constitutes *prima facie* proof of the claim only for the purposes of the adjudication pursuant to Title 85, Chapter 2, Part 2. The claim does not constitute *prima facie* evidence of historical use for the purposes of a change in appropriation proceeding before the Department under § 85-2-402, MCA. Importantly, irrigation water right claims are also not decreed with a volume and are, thus, limited by the Water Court to their “historic beneficial use.” §85-2-234, MCA. Town of Manhattan v. DNRC, Cause No. DV-09-872C, Montana Eighteenth Judicial District Court, *Order Re Petition for Judicial Review*, (2011) Pg. 11 (proof of historic use is required even where a water right is decreed).

14. The Department is within its authority to put a volume on a change authorization even where there is no volume on the Statement of Claim. The placement of a volume on the change authorization is not an “adjudication” of the water right. Hohenlohe ¶¶ 30-31.

15. Consumptive use of water may not increase when an existing water right is changed. Town of Manhattan v. DNRC, Cause No. DV-09-872C, Montana Eighteenth Judicial District Court, *Order Re Petition for Judicial Review*, (2011) Pg. 9; *In the Matter of Application to Change a Water Right No. 40M 30005660 by Harry Taylor II and Jacqueline R. Taylor*, (DNRC Final Order 2005); *In the Matter of Application to Change a Water Right No. 40A 30005100 by Berg Ranch Co./Richard Berg*, DNRC Proposal For Decision adopted by Final Order (2005); *In the Matter of Application to Change a Water Right No. 41I 30002512 by Brewer Land Co, LLC*, DNRC Proposal For Decision adopted by Final Order (2003) . An increase in consumptive use

constitutes a new appropriation. Town of Manhattan v. DNRC, Cause No. DV-09-872C, Montana Eighteenth Judicial District Court, *Order Re Petition for Judicial Review*, (2011) Pg. 9 (citing Featherman v. Hennessy, (1911) 43 Mont. 310, 316-17).

In a change proceeding, the *consumptive* use of the historical right has to be determined:

In a reallocation [change] proceeding, both the actual historic consumptive use and the expected consumptive use resulting from the reallocation [change] are estimated. Engineers usually make these estimates.

With respect to a reallocation [change], the engineer conducts an investigation to determine the historic diversions and the historic consumptive use of the water subject to reallocation [change]. This investigation involves an examination of historic use over a period that may range from 10 years to several decades, depending on the value of the water right being reallocated [changed].

....

When reallocating [changing] an irrigation water right, the quantity and timing of historic consumptive use must be determined in light of the crops that were irrigated, the relative priority of the right, and the amount of natural rainfall available to and consumed by the growing crop.

....

Expected consumptive use after a reallocation [change] may not exceed historic *consumptive* use if, as would typically be the case, other appropriators would be harmed. Accordingly, if an increase in consumptive use is expected, the quantity or flow of reallocated [changed] water is decreased so that actual historic consumptive use is not increased.

2 Water and Water Rights at § 14.04(c)(1); see also, Basin Elec. Power Co-op. v. State Bd. of Control, 578 P.2d 557, 564 -566 (Wyo,1978) (a water right holder may not effect a change of use transferring more water than he had historically consumptively used; regardless of the lack of injury to other appropriators, the amount of water historically diverted under the existing use, the historic rate of diversion under the existing use, the historic amount consumptively used under the existing use, and the historic amount of return flow must be considered.). The Department can request consumptive use information from an applicant. Hohenlohe ¶¶ 51, 68-69.

16. Denial of a change in appropriation in whole or part does not affect the exercise of the underlying right(s). The water right holder can continue to exercise the underlying right, unchanged as it has historically. The Department's change process only addresses the water right holder's ability to make a different use of that existing right. E.g., Town of Manhattan v.

DNRC, Cause No. DV-09-872C, Montana Eighteenth Judicial District Court, *Order Re Petition for Judicial Review*, (2011) Pg. 8; *In the Matter of Application to Change Appropriation Water Right No.41F-31227 by T-L Irrigation Company* (DNRC Final Order 1991).

17. The Department may take notice of judicially cognizable facts and generally recognized technical or scientific facts within the Department's specialized knowledge. Admin. R. Mont. (ARM) 36.12.221(4).

### **Historic Use:**

#### **FINDINGS OF FACT**

18. Irrigation was first claimed by James Ellison for this property in 1888.

19. Mr. Lee Matthews, neighbor to the north of the Tedham property and sharer of the Mosquito Creek head gate, frequently visited the Tedham farm and has personal knowledge of the farming practices of the land growing-up next to and occasionally working as a farm hand on the original Britton ranch which is now Tedhams. The two properties have historically shared the diversion from Mosquito Creek.

20. Water has historically been diverted from a head gate and diversion structure located on Mosquito Creek that conveys water into an 18-inch deep, 24-inch wide bottom ditch that is 1,825 feet long into a siphon under Montana Highway 200. Water then traveled for 272 feet in a like ditch to a diversion splitter box on Tedhams property that then feeds some water north to Matthews' property and east and south to Tedhams land. Tedham's claimed amounts total 912.28 GPM while Matthew's claimed amounts total 90 GPM for a total peak ditch flow claimed of 1,002.28 GPM. Conveyance capacity of water in the historic/current maintained ditch from the head gate using the software Flowmaster calculates to 1,060 GPM at peak flow with a top width of 2.02 feet and a height of 1.35 feet and a total ditch length of 2,097 feet (1,825 + 272). Vegetation loss on the ditch calculates to **2.43 AF** ( $0.0075/\text{mile} * 2.23 \text{ ft}^2/\text{sec} * 183 \text{ days} * .4 \text{ miles} * 2\text{ft}/\text{ft}^3/\text{s}/\text{d}$ ); ditch evaporation is **0.32 AF** (using ditch width of 2 feet \* ditch length of 2,097 \* Potts rate of 3.26 feet/surface acre for Thompson Falls  $\div 43,560 \text{ ft}^2/\text{acre}$ ); and seepage loss for this portion of conveyance with a loss rate of  $0.68 \text{ ft}^3/\text{ft}^2/\text{day}$  (Ashy Loam and Ashy Fine Sandy Loam) for 183 days (May 1 – October 31), with a wetted perimeter of 4.8 feet calculates

to **28.85 AF**. Tedhams' irrigation portion (418.48 GPM of 1,002.28 GPM) equals **13.20 AF** (41.8% of total ditch vegetative loss + ditch evaporation + seepage loss = 31.60 AF).

21. The historic splitter used rocks or bricks placed in the tee of the flume to direct water where needed. If more water was needed to the north (Matthews property) then the rocks were moved to the south in the tee and vice versa. If less water was needed on both properties then the head gate at mosquito creek was adjusted down.

22. Flow calculations on the 8-inch by 6-inch wooden flume show that the peak flow going north towards Matthews' property was around 217 GPM. This would allow 90 GPM to proceed to Matthews' and approximately 127 GPM to be diverted for flood irrigation on Tedhams property to the north.

23. Water traveling north did so in a wooden flume estimated to be 8 inches wide, 6 inches tall and 968 feet along Tedhams' property based on historical photos and conversations with Mr. Matthews. This flume leaked significantly and head gates and removable panels were used to direct water over the top to flood irrigate the northern section of Tedhams' property before traveling to Matthews. Peak flow rate in the flume, of which 950 feet is on Tedhams' property, is 217 GPM for only 100 days (June 1 – September 9) since Matthews' period of diversion is such. Ditch evaporation for this conveyance is **0.04 AF** ( $0.67 \text{ feet} * 950 \text{ feet} * 3.26 \text{ feet/acre} \div 43,560 \text{ ft}^2/\text{acre}$ ). Seepage loss with a loss rate of  $0.23 \text{ ft}^3/\text{ft}^2/\text{day}$  for 100 days, with a wetted perimeter of 1.667 feet calculates to **0.84 AF**. Tedham's irrigation portion is **0.48 AF** (approximately 55% of total flow in flume).

24. Water from the splitter box traveled south across Tedham's property in a wooden ditch that was 12-inches wide and 6-inches deep and approximately 170-feet long. Peak flow capacity calculations equal 945 GPM. Ditch evaporation is **0.01 AF** ( $1 \text{ foot} * 170 \text{ feet} * 3.26 \text{ feet/acre} \div 43,560 \text{ ft}^2/\text{acre}$ ) and seepage loss for this portion of conveyance with a loss rate of  $0.23 \text{ ft}^3/\text{ft}^2/\text{day}$  for 183 days (May 1 – October 31), with a wetted perimeter of 1.96 feet calculates to **0.32 AF**. Tedham's irrigation portion equals **0.15 AF** (45.9% of total ditch evaporation + seepage loss of 0.33 AF).

25. Headgates in a 360-foot, excavated ditch measuring 12-inches at the bottom and 3.21 feet at the top would feed open channel earthen ditches eastward to allow flood irrigation in the fields. Water then would enter a corrugated metal pipe that routed water under the existing and historic house which was the old Belknap hotel. Water then returned to a like earthen ditch for another 380 feet. Iron and wooden irrigation pipes were moved by hand and would direct water in the field as well as the use of contour ditches. Peak flow capacity was calculated at 972 GPM with 912.28 GPM claimed. Vegetation loss on the ditch calculates to **0.78 AF** ( $0.0075/\text{mile} * 2.03 \text{ ft}^2/\text{sec} * 183 \text{ days} * .14 \text{ miles} * 2\text{ft}/\text{ft}^3/\text{s/d}$ ), ditch evaporation is **0.14 AF** ( $3.21 \text{ feet} * 740 \text{ feet} * 3.26 \text{ feet}/\text{acre} \div 43,560 \text{ ft}^2/\text{acre}$ ) and seepage loss for this portion of conveyance with a loss rate of  $0.67 \text{ ft}^3/\text{ft}^2/\text{day}$  for 183 days (May 1 – October 31), a wetted perimeter of 3.91 feet calculates to **8.14 AF**. Tedham's irrigation portion equals **4.16 AF** (45.9% of total ditch vegetative loss + ditch evaporation + seepage loss = 9.07 AF).

26. Tedham's total conveyance loss for irrigation water is **17.99 AF (13.20 + 0.48 + 0.15 + 4.16)** through this series of ditches.

27. The neighbor, Mr. Matthews, estimates that the fields were flooded a total of three times per year for crop production and pasture use. Based on the layout of the ditches and land, it is assumed that no more than 25 acres was flooded at a time which would result in 5 – 6 flooding sections. The land was irrigated using typical flood irrigation practices which means each section was likely to have been flooded for 7 – 10 days and watering began on or near May 1 each year to mid-June or roughly 45 days. Cutting then could commence mid to late June and then another round of irrigation would start near the beginning of July until mid-August for a second cutting occurring around late August or early September. Flood irrigation would then start again in late September to early October to provide pasture into early winter for the stock on the property and prepare for the next season. Irrigation was discontinued after October 31<sup>st</sup>.

28. Aerial photographs dated 1940, 1953, 1958 and 1964 show probable flood irrigation on the Tedhams' property. The property, according to a topographic map, has a gentle slope to the southeast from the historic ditches allowing for flood irrigation to occur. According to Mr. Matthews, pumps were put into historic ponds in the late 1950s and sprinkler irrigation practice

was used to present day. Filed claim 76N 105405, has no mentions of ponds and therefore all historic irrigation was based on flood irrigation.

29. Pre-1973 aerial photos show that at least 115 acres was irrigated at one time. Historic diverted volume was calculated using ARM 36.12.1902(10). A management factor of 58.8% for Sanders County, Thompson Falls Power weather station was used with a requirement of 22.49 inches equal to 1.10 foot/acre of water needed. On 115 historic irrigated acres, this calculates to 126.73 AF of consumption. Anon-farm efficiency of 60% was then applied for flood irrigation to equal 211.22 AF of diverted volume.

30. The Department finds the following historic use for this May 1 through October 31 claim:

WR Claim #	Priority Date	Flow Rate	Purpose (Total Acres)	Consump Use	Diverted Volume	Conveyance Losses	Total Diverted Volume	Place of Use	Point of Diversion
76N 105405	10/9/1888	418.48 GPM (.93 CFS)	Irrigation 115 acres	126.73 AF	211.22 AF	17.99 AF	229.21 AF	SE S14, T22N, R30W and NE S23, T22N, R30W	SENWSW S14, T22N, R30W

### CONCLUSIONS OF LAW

31. Applicant seeks to change existing water rights represented by its Water Right Claims. The “existing water rights” in this case are those as they existed prior to July 1, 1973, because no changes could have been made to those rights after that date without the Department’s approval. §85-2-402(1), MCA; Royston, supra; Town of Manhattan v. DNRC, Cause No. DV-09-872C, Montana Eighteenth Judicial District Court, *Order Re Petition for Judicial Review*, (2011) Pg. 7; cf. General Agriculture Corp. v. Moore (1975), 166 Mont. 510, 534 P.2d 859 (limited exception for perfection). Thus, the focus in a change proceeding is what those rights looked like and how they were exercised prior to July 1, 1973. E.g., Matter of Clark Fork River Drainage Area (1992), 254 Mont. 11, 17, 833 P.2d 1120. An applicant can change only that to which it has a perfected right. E.g., McDonald, supra; Town of Manhattan v. DNRC, Cause No. DV-09-872C, Montana Eighteenth Judicial District Court, *Order Re Petition for Judicial Review*, (2011) Pg. 9 (the rule that one may change only that to which it has a right is a fundamental tenet of Montana water law and imperative to MWUA change provisions, citing Featherman v.

Hennessy, (1911) 43 Mont. 310, and Quigley v. McIntosh, (1940) 110 Mont. 495); see also In re Application for Water Rights in Rio Grande County 53 P.3d 1165, 1170 (Colo. 2002) (while the enlargement of a water right, as measured by historic use, may be injurious to other rights, it also simply does not constitute a permissible “change” of an existing right); Robert E. Beck, 2 Water and Water Rights at § 16.02(b) at p. 271 (issues of waste and historic use, as well as misuse ... properly be considered by the administrative official or water court when acting on a reallocation application,” (citations omitted)); *In the Matter of Application for Change in Appropriation of Water Right No. 139988-40A, 139989-40A, and 50641-40A by Careless Creek Ranch* (DNRC Final Order 1988)(where there is water at new point of diversion, more often than not purpose of change is to pick up that extra water, application must be made for a new water right to cover the extra water; it cannot be appropriated under the guise of a change in the old right).

32. The Department as fact finder in a change proceeding must have the required information to evaluate historic use of a water right to determine whether the change will result in expansion of the original right, or adversely affect water users. The Department cannot determine whether there will be adverse effect to other appropriators from a different use of water until it knows how the water has been historically used, including the pattern of use. Town of Manhattan v. DNRC, Cause No. DV-09-872C, Montana Eighteenth Judicial District Court, *Order Re Petition for Judicial Review*, (2011) Pg.13 (upholding ARM 36.12.1902, reflecting basic water law principles).

33. The requirement that a water user establish the parameters and pattern of use of a water right through evidence of historic use is a fundamental principle of Montana water law that serves to ensure that a change does not expand a water right (i.e. bootstrap a new use with a senior priority date) or adversely affect other water users. Evidence of historic use serves the important function of protecting other water users who have come to rely upon maintaining surface and ground water conditions for their livelihood. Id. at Pg. 14.

34. Water Resources Surveys were authorized by the 1939 legislature. 1939 Mont. Laws Ch. 185, § 5. Since their completion, Water Resources Surveys have been invaluable evidence in water right disputes and have long been relied on by Montana courts. In re Adjudication of Existing Rights to Use of All Water in North End Subbasin of Bitterroot River Drainage Area in

Ravalli and Missoula Counties (1999), 295 Mont. 447, 453, 984 P.2d 151, 155 (Water Resources Survey used as evidence in adjudicating of water rights); Wareing v. Schreckendgust (1996), 280 Mont. 196, 213, 930 P.2d 37, 47 (Water Resources Survey used as evidence in a prescriptive ditch easement case); Olsen v. McQueary (1984), 212 Mont. 173, 180, 687 P.2d 712, 716 (judicial notice taken of Water Resources Survey in water right dispute concerning branches of a creek).

35. The Department has adopted a rule providing for the calculation of historic consumptive use where the applicant proves by a preponderance of the evidence that the acreage was historically irrigated. ARM 36.12.1902 (16)

36. If an applicant seeks more than the historic consumptive use as calculated by ARM 36.12.1902 (16), the applicant bears the burden of proof to demonstrate the amount of historic consumptive use by a preponderance of the evidence. The actual historic use of water could be less than the optimum utilization represented by the calculated duty of water in any particular case. E.g., Application for Water Rights in Rio Grande County 53 P.3d 1165 (Colo., 2002) (historical use must be quantified to ensure no enlargement); *In the Matter of Application to Change Water Right No. 41H 1223599 by MGRR #1, LLC.*, DNRC Proposal for Decision adopted by Final Order (2005); Orr v. Arapahoe Water and Sanitation Dist. 753 P.2d 1217, 1223 -1224 (Colo., 1988)(historical use of a water right could very well be less than the duty of water); Weibert v. Rothe Bros., Inc., 200 Colo. 310, 317, 618 P.2d 1367, 1371 - 1372 (Colo. 1980) (historical use could be less than the optimum utilization “duty of water”).

37. While evidence may be provided that a particular parcel was irrigated, the actual amount of water historically diverted and consumed is critical. E.g., In the Matter of Application to Change Water Right No. 41H 1223599 by MGRR #1, LLC., supra. The Department cannot assume that a parcel received the full duty of water or that it received sufficient water to constitute full service irrigation for optimum plant growth. Even when it seems clear that no other rights could be affected solely by a particular change in the location of diversion, it is essential that the change also not enlarge an existing right. Trail's End Ranch, L.L.C. v. Colorado Div. of Water Resources 91 P.3d 1058, 1063 (Colo., 2004) (*citing Application for Water Rights*

in Rio Grande County, 53 P.3d at 1168 and Empire Lodge Homeowners' Ass'n v. Moyer, 39 P.3d 1139, 1147 (Colo., 2001)).

38. “Absent quantification of annual volume historically consumed, no protective condition limiting annual volume delivered can be placed on a Change Authorization, and without such a condition, the evidence of record will not sustain a conclusion of no adverse effect to prior . . . appropriators.” *In the Matter of the Application for Change of Appropriation Water Rights Nos. 101960-41S and 101967-41S by Keith and Alice Royston*, COL No. 8 (1989), *affirmed* (1991), 249 Mont. 425, 428, 816 P.2d 1054, 1057; *In the Matter of the Application of Beneficial Water Use Permit Number 41H 30003523 and the Application for Change No. 41H 30000806 by Montana Golf Enterprises, LLC.*, DNRC Proposal for Decision ( 2003) (proposed decision denied change for lack of evidence of historical use; application subsequently withdrawn); see also Hohenlohe ¶¶ 43, 45; Application for Water Rights in Rio Grande County (2002), *supra*; *In the Matter of Application to Change Water Right No. 41H 1223599 by MGRR #1, LLC.*, *supra*.

39. The Department has the authority to consider waste in determining a volume for change in a water right.

*The Department retains the discretion to take into account reasonable or wasteful use and to amend or modify a proposed change of use application according to those determinations. See [Bostwick, 2009 MT 181, ¶ 21, 351 Mont. 26, 208 P.3d 868.](#)*

Hohenlohe ¶ 71.

40. Applicant may proceed under ARM. 36.12.1902, the Department’s historic consumptive use rule for the calculation of consumptive use or may present its own evidence of historic beneficial use. In this case Applicant has elected to proceed under ARM 36.12.1902. (Finding of Fact No. 29)

41. The Applicant has proven by a preponderance of the evidence the historic use of Water Right Claim No. 76N 105405 of 229.21 AF diverted volume and 418.48 GPM (0.93 CFS) flow rate with a consumptive use of 126.73 AF. (Findings of Fact No. 18 - 30)

**Adverse Effect:**

**FINDINGS OF FACT**

42. Historically, pre-1960, there was flood irrigation from Mosquito Creek on the property. There existed two ponds on the west side of the property which were used for storage and secondary diversions for sprinkler irrigation. In the late 1950's or early 1960's, pumps were placed on the property to allow for sprinkler irrigation. The north and south fields were then sprinkler irrigated with pumps in the ponds and the middle field was still flood irrigated. The pumps were run only during the day to allow the ponds to be refilled overnight. These two ponds were not part of Statement of Claim 76N 105405 and therefore sprinkler irrigation was not included in historical consumptive use.

43. Calculations show historical diversion for irrigation was 229.21 AF (211.22 AF for irrigation requirements + 17.99 AF conveyance losses) with 126.73 AF being consumed. Present use of this irrigation water calculates to 229.16 AF being diverted (155.14 AF for irrigation requirements + 11.94 AF for pond capacity and evaporation + 16.14 AF conveyance losses + 45.94 AF for pond seepage) with 126.72 AF being consumed. Additional required irrigation water can be obtained from waters from the Clark Fork River under Provisional Permit 76N 38319, which can provide up to 250 AF of water on 100 acres in the SE of Section 14 (82.95 acres overlapping with this claim change) and 30 acres in the N½NE of Section 23 all in Township 22N, Range 30W.

44. To ensure that water diversions do not exceed claimed flows from Mosquito Creek, the applicant will install a water measuring device below the shared head gate and on his property between pond #1 and pond #2. The proposed device is a repleg flume in the ditch capable of measuring flows between 50 and 1,000 GPM. Flow measurements will be taken by the Applicant throughout the irrigation season and submitted to the Department under the following condition of this change:

THE APPROPRIATOR SHALL INSTALL A DEPARTMENT APPROVED MEASUREMENT DEVICE AT A POINT IN THE CONVEYANCE APPROVED BY THE DEPARTMENT. WATER MUST NOT BE DIVERTED UNTIL THE REQUIRED MEASURING DEVICE IS IN PLACE AND OPERATING. ON A FORM PROVIDED BY THE DEPARTMENT, THE APPROPRIATOR SHALL KEEP A WRITTEN *MONTHLY* RECORD OF THE FLOW RATE

AND VOLUME OF ALL WATER DIVERTED, INCLUDING THE PERIOD OF TIME. RECORDS SHALL BE SUBMITTED BY JANUARY 31 OF EACH YEAR AND UPON REQUEST AT OTHER TIMES DURING THE YEAR. FAILURE TO SUBMIT REPORTS MAY BE CAUSE FOR REVOCATION OF A PERMIT OR CHANGE. THE RECORDS MUST BE SENT TO THE WATER RESOURCES REGIONAL OFFICE. THE APPROPRIATOR SHALL MAINTAIN THE MEASURING DEVICE SO IT ALWAYS OPERATES PROPERLY AND MEASURES FLOW RATE AND VOLUME ACCURATELY.

45. A call from senior appropriators can be met by adjusting the headgate on Mosquito Creek. Priority of irrigation will then be on the 24.36 acres that cannot be irrigated from the Clark Fork River. Valves on the irrigation system can be turned to allow either water from Mosquito Creek or that from the Clark Fork River. Ultimately, the headgate can be shut down as to not allow any water to flow from Mosquito Creek.

#### CONCLUSIONS OF LAW

46. The Applicant bears the affirmative burden of proving that proposed change in appropriation right will not adversely affect the use of the existing water rights of other persons or other perfected or planned uses or developments for which a permit or certificate has been issued or for which a state water reservation. §85-2-402(2)(a), MCA. Royston, supra. It is the applicant's burden to produce the required evidence. *In the Matter of Application to Change Water Right No. 41H 1223599 by MGRR #1, LLC.*, (DNRC Final Order 2005).

47. Prior to the enactment of the Water Use Act in 1973, the law was the same in that an adverse effect to another appropriator was not allowed. Holmstrom Land Co., Inc., v. Newlan Creek Water District (1979), 185 Mont. 409, 605 P.2d 1060, *rehearing denied*, (1980), 185 Mont. 409, 605 P.2d 1060, following Lokowich v. Helena (1913), 46 Mont. 575, 129 P. 1063; Thompson v. Harvey (1974), 164 Mont. 133, 519 P.2d 963 (plaintiff could not change his diversion to a point upstream of the defendants because of the injury resulting to the defendants); McIntosh v. Graveley (1972), 159 Mont. 72, 495 P.2d 186 (appropriator was entitled to move his point of diversion downstream, so long as he installed measuring devices to ensure that he took no more than would have been available at his original point of diversion); Head v. Hale (1909), 38 Mont. 302, 100 P. 222 (successors of the appropriator of water appropriated for placer mining purposes cannot so change its use as to deprive lower appropriators of their rights, already acquired, in the use of it for irrigating purposes); Gassert v. Noyes (1896), 18 Mont. 216, 44 P.

959 (after the defendant used his water right for placer mining purposes the water was turned into a gulch, where the plaintiff appropriated it for irrigation purposes; the defendant then changed the place of use of his water right, resulting in the water no longer being returned to the gulch - such change in use was unlawful because it deprived the plaintiff of his subsequent right).

48. The cornerstone of an evaluation of adverse effect to other appropriators is the determination of historic use of water. One cannot determine whether there is adverse effect to another appropriator until one knows what the historic water right is to be changed. It is a fundamental part of Montana and western water law that the extent of a water right is determined by reference to the historic beneficial use of the water right. McDonald; Town of Manhattan v. DNRC, Cause No. DV-09-872C, Montana Eighteenth Judicial District Court, *Order Re Petition for Judicial Review*, (2011) Pg.13; *City of Bozeman* (DNRC), supra; Application for Water Rights in Rio Grande County, 53 P.3d 1165, 1170 (Colo. 2002). The Montana Supreme Court has explained:

An appropriator historically has been entitled to the greatest quantity of water he can put to use. Sayre v. Johnson, 33 Mont. 15, 18, 81 P. 389, 390 (1905). The requirement that the use be both beneficial and reasonable, however, proscribes this tenet. In re Adjudication of Existing Rights to the Use of All Water, 2002 MT 216, ¶ 56, 311 Mont. 327, 55 P.3d 396; see also § 85-2-311(1)(d), MCA. This limitation springs from a fundamental tenet of western water law-that an appropriator has a right only to that amount of water historically put to beneficial use-developed in concert with the rationale that each subsequent appropriator “is entitled to have the water flow in the same manner as when he located,” and the appropriator may insist that prior appropriators do not affect adversely his rights. Spokane Ranch & Water Co. v. Beatty, 37 Mont. 342, 351, 96 P. 727, 731 (1908)....

The question of adverse effect under §§ 85-2-402(2) and -408(3), MCA, implicates return flows. A change in the amount of return flow, or to the hydrogeologic pattern of return flow, has the potential to affect adversely downstream water rights. There consequently exists an inextricable link between the “amount historically consumed” and the water that re-enters the stream as return flow...

We do not dispute this interrelationship between historic consumptive use, return flow, and the amount of water to which an appropriator is entitled as limited by his past beneficial use.

Hohenlohe ¶¶ 43-45.

The Colorado Supreme Court has repeatedly addressed this same issue of historic use and adverse effect. E.g., Application for Water Rights in Rio Grande County, 53 P.3d 1165, 1170 (Colo. 2002); Santa Fe Trail Ranches Property Owners Ass'n v. Simpson, 990 P.2d 46, 55 -57 (Colo.,1999); Orr v. Arapahoe Water and Sanitation Dist., 753 P.2d 1217, 1223 (Colo.1988). The Colorado Supreme Court has consistently explained:

“A classic form of injury involves diminution of the available water supply that a water rights holder would otherwise enjoy at the time and place and in the amount of demand for beneficial use under the holder's decreed water right operating in priority.” Citations omitted) . . .

... it is inherent in the notion of a “change” of water right that the property right itself can only be changed and not enlarged. (citation omitted). The appropriator of native water may not enlarge an appropriation without establishing all of the elements of an independent appropriation, which will necessarily have a later priority date (citation omitted) ...

... diversions are implicitly limited in quantity by historic use at the original decreed point of diversion...

... we have explained this limitation by noting that “over an extended period of time a pattern of historic diversions and use under the decreed right at its place of use will mature and become the measure of the water right for change purposes.” (citation omitted). The right to change a point of diversion is therefore limited in quantity by the historic use at the original point of diversion. (citations omitted) “Thus, a senior appropriator cannot enlarge the historical use of a water right by changing the point of diversion and then diverting from the new location the full amount of water decreed to the original point of diversion, even though the historical use at the original point of diversion might have been less than the decreed rate of diversion.”

FN9. The term “historic use” refers to the “historic consumptive use,” (citations omitted).

Application for Water Rights in Rio Grande County, 53 P.3d at 1169-1170.

49. Consumptive use of water may not increase when an existing water right is changed. E.g., Town of Manhattan v. DNRC, Cause No. DV-09-872C, Montana Eighteenth Judicial District Court, *Order Re Petition for Judicial Review*, (2011) Pg.9; *In the Matter of Application to*

*Change a Water Right No. 40M 30005660 by Harry Taylor II And Jacqueline R. Taylor*, (DNRC Final Order 2005); *In the Matter of Application to Change a Water Right No. 41I 30002512 by Brewer Land Co, LLC*, DNRC Proposal For Decision adopted Final Order (2003). Applicant must provide evidence of historical amount consumed and the amount to be consumed under the proposed change. *In the Matter of the Application of Beneficial Water Use Permit Number 41H 30003523 and the Application for Change No. 41H 30000806 by Montana Golf Enterprises, LLC.*, (DNRC Proposal for Decision 2003); *In the Matter of Application to Change a Water Right No. 43B 30002710 by USA (Dept. Of Agriculture – Forest Service)* (DNRC Final Order 2005); *In The Matter of Application No. 76H-30009407 to Change Water Right Nos. 76H-108772 and 76H-1-8773 by North Corporation* (DNRC Final Order 2008).

50. It is well settled in Montana and western water law, that once water leaves the control of the appropriator whether through seepage, percolating, surface, or waste waters,” and reaches a water course, it is subject to appropriation. E.g., *Rock Creek Ditch & Flume Co. v. Miller* (1933), 93 Mont. 248, 17 P.2d 1074, 1077; *Newton v. Weiler* (1930), 87 Mont. 164, 286 P. 133; *Popham v. Holloron* (1929), 84 Mont. 442, 275 P. 1099, 1102; *Galiger v. McNulty* (1927) 80 Mont. 339, 260 P. 401; *Head v. Hale* (1909), 38 Mont. 302, 100 P. 222; *Alder Gulch Con. Min. Co. v. King* (1886), 6 Mont. 31, 9 P. 581; Doney, *Montana Water Law Handbook* (1981) [hereinafter Doney] p.22 (if return flows not part of original appropriation then it is available for appropriation by others); see also *Hidden Hollow Ranch v. Fields*, 2004 MT 153, 321 Mont. 505, 92 P.3d 1185. An intent to capture and reuse return flows must be manifested at the time of the appropriation. E.g., *Rock Creek Ditch and Flume*, 17 P.2d at 1080; Albert Stone, *Montana Water Law* (1994) p. 84. This is consistent with the cornerstone of the prior appropriation doctrine that beneficial use is the basis, the measure and limit of a water right. E.g., *McDonald v. State* (1986), 220 Mont. 519, 722 P.2d 598; *Toohey v. Campbell* (1900), 24 Mont. 13, 60 P. 396. Return flows are not part of a water right and an appropriator is not entitled to return flows in a change in appropriation. Generally, return flow is water that is not consumed or is lost to the system. see also, Doney, p. 21.

The Montana Supreme Court also recently recognized the fundamental nature of return flows to Montana’s water sources in addressing whether the Mitchell Slough was a perennial

flowing stream, given the large amount of irrigation return flow which feeds the stream. The Court acknowledged that the Mitchell's flows are fed by irrigation return flows available for appropriation. Bitterroot River Protective Ass'n, Inc. v. Bitterroot Conservation Dist. 2008 MT 377, ¶¶ 22, 31, 43, 346 Mont. 508, ¶¶ 22, 31,43, 198 P.3d 219, ¶¶ 22, 31,43, *citing* Hidden Hollow Ranch v. Fields, 2004 MT 153, 321 Mont. 505, 92 P.3d 1185; see discussion in Hohenlohe, supra.

51. The analysis of return flow is a critical component of a change in appropriation and specifically whether a change will cause adverse effect to another appropriator. A change can affect return flow patterns and timing, affecting other water users. E.g., Hohenlohe, supra; *In the Matter of Application to Change Appropriation Water Right No.41F-31227 by T-L Irrigation Company* (DNRC Final Order 1991). An applicant for a change in appropriation must analyze return flows (amount, location, and timing) to prove that the proposed change does not adversely affect other appropriators who may rely on those return flows as part of their water supply to exercise their water rights. E.g., Royston, supra. The level of analysis of return flow will vary depending on the nature of the change application. Hohenlohe ¶¶ 45-46, 55-56.

52. The Applicant has proven that the proposed change in appropriation right will not adversely affect the use of the existing water rights of other persons or other perfected or planned uses or developments for which a permit or certificate has been issued or for which a state water reservation has been issued. §85-2-402(2)(b), MCA.(Findings of Fact Nos. 42 - 45)

## **Beneficial Use**

### **FINDINGS OF FACT**

53. Applicant proposes to use water from Mosquito Creek for sprinkler irrigation on 107.31 acres of the originally claimed 115 acres and add two storage ponds.

54. Applicant proposes to divert 418.48 GPM up to 229.16 AF from May 1 through October 31 annually.

55. Historic concrete headgate is still in place and being used on Mosquito Creek. Conveyance of water down the 2,097-foot ditch to the splitter box on Tedhams property has not

changed. Conveyance capacity of water in the historic/current maintained ditch, using the software Flowmaster, calculates to 1,060 GPM at peak flow using a width of 2.56 feet and a height of 1.35 feet and a total ditch length of 2,097 feet. Vegetation loss on the ditch calculates to 2.43 AF, ditch evaporation is 0.32 AF and seepage loss for this portion of conveyance with a loss rate of 0.68 ft<sup>3</sup>/ft<sup>2</sup>/day for 183 days (May 1 – October 31), a wetted perimeter of 4.8 feet calculates to 28.85 AF total. Tedham’s irrigation portion equals **13.20 AF** (41.8% of total ditch vegetative loss + ditch evaporation + seepage loss = 31.60 AF).

56. Tedham irrigation water is no longer carried along with Matthews’ water from the splitter box north.

57. From the splitter box, Tedham water now flows through a 12-inch buried PVC pipe 170 feet to pond #1 with no conveyance losses.

58. An excavated ditch approximately 524 feet long, a wetted perimeter of 3.91 feet and a top width of 3.21 feet carries water from pond #1 to pond #2. Vegetative loss in the ditch calculates to 0.55 AF, ditch evaporation is 0.02 AF and seepage loss with a loss rate of 0.67 ft<sup>3</sup>/ft<sup>2</sup>/day for 183 days (May 1 – October 31) calculates to 5.77 AF total. Tedham’s irrigation portion equals **2.95 AF** (45.9% of total ditch vegetative loss + ditch evaporation + seepage loss = 6.42 AF).

59. Total current conveyance losses for irrigation equal **16.14 AF**.

60. Volume demands for pond storage calculate to **11.94 AF** of diverted volume with 4.78 AF being consumed by evaporation.

Ponds	Surface area (acres)	Maximum depth (feet)	Capacity (AF)	Evaporation (AF) 5/1 – 10/31
#1	0.08	4	0.16	0.21
#2	1.75	8	7	4.57
Totals	1.83		<b>7.16</b>	<b>4.78</b>

61. Pond seepage was determined through an onsite seepage test by Billmayer & Hafferman, Inc starting May 22, 2014. Seepage volume was calculated by taking water level drop -

evaporation loss per day \* pond area \* number of days. Pond #1 has a surface area of 0.08 acres and an average daily seepage loss volume of 0.001 AF. Pond #2 has a surface area of 1.75 acres and an average daily seepage loss volume of 0.25 AF. Seepage for Pond #1 calculates to 0.26 AF and seepage for pond #2 was calculates to 45.68 AF per 183 day season. Total pond seepage is **45.94 AF**.

62. Volume demands for irrigation were calculated using Irrigation Water Requirements (IWR) standards and the Thompson Falls Power weather station for a dry year value of 20.16 inches. This number was reduced by April's estimated consumption 0.58 inches to 19.58 inches because period of diversion does not start until May 1 annually. Mosquito Creek will irrigate 24.36 acres with 19.58 inches of water with a DNRC standard efficiency of 70% for sprinkler irrigation for a demand of **56.78 AF** ( $19.58'' \div 12'' * 24.36 \text{ acres} \div .70 \text{ efficiency}$ ). This diversion will also contribute a portion, 9.96 inches, of irrigation demands on the the remaining 82.95 acres equaling **98.36 AF** ( $9.96 \text{ inches} \div 12 \text{ inches} * 82.95 \text{ acres} \div .70 \text{ efficiency}$ ) with the remaining irrigation requirements met by the Clark Fork River diversion. The Clark Fork River diversion will provide 97.37 AF of water ( $(19.58 \text{ inches} - 9.96 \text{ inches}) \div 12'' * 82.95 \text{ acres} \div .70 \text{ efficiency}$ ). Total irrigation demands from Mosquito Creek total **155.14 AF**.

63. The requested flow rate of **418.48 GPM** is based on irrigation diversion from pond #2 at a rate of **396 GPM** for the system comprised of 132 sprinkler heads each producing 3 GPM; an average conveyance loss rate on 16.14 AF of ditch loss for the full 183-day season and 45.94 AF of pond seepage is **76.77 GPM** (19.96 GPM ditches and 56.81 GPM ponds) and pond evaporation losses of both ponds of 4.78 AF with an average rate of **5.87 GPM**. At 346.79 GPM after conveyance losses to the ponds, the ponds can be filled in 4.67 days to start the irrigation season. Pond evaporation and ditch losses can be made-up when irrigation is halted for cuttings.

## CONCLUSIONS OF LAW

64. Under the change statute, §85-2-402(2)(c), MCA, an Applicant must prove by a preponderance of the evidence the proposed use is a beneficial use. An appropriator may appropriate water only for a beneficial use. §§85-2-301 and 311(1)(d), MCA.

65. The analysis of the beneficial use criterion is the same for change authorizations under §85-2-402, MCA, and new beneficial permits under §85-2-311, MCA. The amount of water under a water right is limited to the amount of water necessary to sustain the beneficial use. E.g., Bitterroot River Protective Association v. Siebel, *Order on Petition for Judicial Review*, Cause No. BDV-2002-519, Montana First Judicial District Court (2003), *affirmed on other grounds*, 2005 MT 60, 326 Mont. 241, 108 P.3d 518; Worden v. Alexander (1939), 108 Mont. 208, 90 P.2d 160; Allen v. Petrick (1924), 69 Mont. 373, 222 P. 451; Sitz Ranch v. DNRC, DV-10-13390, Montana Fifth Judicial District Court, *Order Affirming DNRC Decision*, (2011) Pg. 3 (citing BRPA v. Siebel, 2005 MT 60, and rejecting applicant's argument that it be allowed to appropriate 800 acre-feet when a typical year would require 200-300 acre-feet); *In the Matter of Application for Beneficial Water Use Permit No. 76H-84577 by Thomas and Janine Stellick*, DNRC Final Order (1995)(permit denied because no evidence in the record that the amount of water needed for fish and wildlife; absence of evidence of waste does not meet the standard of proof); *In the Matter of Application No. 40A-108497 by Alex Matheson*, DNRC Proposal for Decision adopted by Final Order (2000) (application denied as to fishery and recreation use for lack of proof); *In the Matter of Application for Beneficial Water Use Permit No. 76LJ-115-831 by Benjamin and Laura Weidling*, (DNRC Final Order 2003), *aff'd on other grounds*, In the Matter of Application for Beneficial Water Use Permit No. 76LJ-115-83100 by Benjamin and Laura Weidling and No. 76LJ-1158300 by Ramona S. and William N. Nessly, *Order on Motion for Petition for Judicial Review*, Cause No. BDV-2003-100, Montana First Judicial District (2004) (fish and wildlife use denied for lack of proof); *In The Matter of Application For Beneficial Water Use Permit 76LJ 30008762 by Vinnie J & Susan N Nardi*, DNRC Proposal for Decision adopted by Final Order (2006); Statement of Opinion, *In the Matter of Beneficial Water Use Permit No. 41H-30013678 by Baker Ditch Company* (June 11, 2008)(change authorization denied - no credible evidence provided on which a determination can be made of whether the

quantity of water requested is adequate or necessary to sustain the fishery use, or that the size or depth of the ponds is adequate for a fishery); *In the Matter of Application for Beneficial Water Use Permit No. 43C 30007297 by Dee Deaterly*, (DNRC Final Order 2007), *aff'd on other grounds*, *Deaterly v. DNRC et al.*, Cause No. BDV-2007-186, Montana First Judicial District, *Nunc Pro Tunc Order on Petition for Judicial Review* (2008) (permit denied in part because of failure to support quantity of water needed for pond); see also §85-2-312(1) (a), MCA.

The Department may issue a permit for less than the amount of water requested, but may not issue a permit for more water than is requested or than can be beneficially used without waste for the purpose stated in the application. §85-2-312, MCA; see also, *McDonald*; *Toohey*. The Department can also consider waste in a change proceeding. Hohenlohe ¶ 71. Waste is defined to include the “application of water to anything but a beneficial use.” §85-2-102(23), MCA. An absence of evidence of waste does not prove the amount requested is for a beneficial use. *E.g.*, *Stellick*, *supra*.

66. It is the Applicant’s burden to prove the required criteria. *Royston*. A failure to meet that affirmative burden does not mean the criterion is met for lack of contrary evidence. *E.g.*, *In the Matter of Application to Change Water Right No. 41H 1223599 by MGRR #1, LLC.*, (DNRC Final Order 2005).

67. Applicant proposes to use water for irrigation which is a recognized beneficial use. §85-2-102(4), MCA. Applicant has proven by a preponderance of the evidence irrigation with storage ponds are beneficial uses and that 229.16 AF of diverted volume and 418.48 GPM flow rate of water requested is the amount needed to sustain the beneficial use. (Findings of Fact Nos. 53 - 63)

### **Adequate Diversion**

#### **FINDINGS OF FACT**

68. The present headgate is the historic concrete headgate measuring 24.6 feet across Mosquito Creek with two 4-foot by 2.15-foot outlets allowing flow through of the creek. The Tedhams – Matthews weir is located to the side and measures 2-feet by 2-feet and is capable of discharging a flow up to 8 CFS.

69. Conveyance of water down the 2,097-foot ditch from the headgate to the splitter box on Tedhams property has not changed. Conveyance capacity of water in the historic/current maintained ditch, using the software Flowmaster, calculates to 1,060 GPM at peak flow using a width of 2.56 feet and a height of 1.35 feet and a total ditch length of 2,097 feet.

70. Once water arrives at the splitter box, Matthews' water traveling north goes through a 4-inch PVC pipe. Tedham water is no longer conveyed north or east along with Matthews' water. The splitter box consists of a concrete box with an 18-inch CMP pipe inlet under the railroad from Mosquito Creek on the west side. Flow diversions to Matthews and Tedhams are controlled with bricks and orifice plates. Mr. Matthews places bricks in front of his 4-inch PVC pipe and checks his flow to his property with a bucket and stop watch to make adjustments as needed. Mr. Tedhams has an orifice plate in front of his 12-inch pipe with a 4-inch hole in it to provide an even flow.

71. Tedhams' water flowing south from the splitter box is now going through a 12-inch PVC main 170 feet to the first storage pond. Mannings equation calculates a maximum discharge of 932 GPM through this pipe.

72. Pond #1 with a surface area of 0.08 acres and a maximum depth of 4 feet has a calculated capacity of 0.16 AF.

73. An excavated ditch approximately 524 feet long, a wetted perimeter of 3.91 feet and a top width of 3.21 feet carries water from pond #1 to pond #2. Manning's equation calculates a maximum discharge of 972 GPM within this ditch.

74. Pond #2 with a surface area of 1.75 acres and a maximum depth of 8 feet has a calculated capacity of 7 AF.

75. The pump from Pond #2 to be used for sprinkler irrigation is a Mercedes-Benz OM161 engine and a Berkely B3ZRM centrifugal pump running at a maximum of 2,250 rpm with a peak output of 396 GPM at a 142 foot total dynamic head. The pump feeds to a 6-inch underground irrigation main that runs north and south on the property with risers to deliver water to the hand lines. These sprinkler lines consist of 40 foot sections of pipe with a sprinkler on the end of each

section. At any one time, there is one mile of sprinkler line useable with a maximum of 132 sprinkler heads capable of an output of 3 GPM each or 396 GPM total.

76. Overflow from Pond #2 collects to the south in the location of an old historic pond and seeps back to the source.

#### CONCLUSIONS OF LAW

77. Pursuant to §85-2-402 (2)(b), MCA, except for a change in appropriation right for instream flow to protect, maintain, or enhance streamflows to benefit the fishery resource pursuant to §85-2-436, MCA, or a temporary change in appropriation right authorization to maintain or enhance streamflows to benefit the fishery resource pursuant to §85-2-408, MCA, or a change in appropriation right to instream flow to protect, maintain, or enhance streamflows pursuant to §85-2-320, MCA, the Applicant must prove by a preponderance of the evidence that the proposed means of diversion, construction, and operation of the appropriation works are adequate.

78. The adequate means of diversion statutory test merely codifies and encapsulates the common law notion of appropriation to the effect that the means of diversion must be reasonably effective, i.e., must not result in a waste of the resource. *In the Matter of Application for Beneficial Water Use Permit No. 33983s41Q by Hoyt* (DNRC Final Order 1981); §85-2-312(1) (a), MCA; see also, *In the Matter of Application to Change a Water Right No. G129039-76D by Keim/Krueger* (DNRC Final Order 1989)(whether party presently has easement not relevant to determination of adequate means of diversion); *In the Matter of Application for Beneficial Water Use Permit No. 69141-76G by Silver Eagle Mining* (DNRC Final Order 1989) (collection of snowmelt and rain in lined ponds considered adequate means of diversion); *In the Matter for Application to Change a Water Right No. 101960-41S by Royston* (DNRC Final Order 1989)(irrigation system is designed for flow rates of 750 gpm, and maximum usage allowed during non-high water periods, is 144-247 gpm, and the evidence does not show that the system can be operated at the lower flow rates; diversion not adequate), *affirmed*, Matter of Application for Change of Appropriation Water Rights Nos. 101960-41S and 101967-41S by Royston

(1991), 249 Mont. 425, 816 P.2d 1054; *In the Matter of Application for Beneficial Water Use Permit No. 41C-11339900 by Three Creeks Ranch of Wyoming LLC* (DNRC Final Order 2002)(information needed to prove that proposed means of diversion, construction, and operation of the appropriation works are adequate varies based upon project complexity; design by licensed engineer adequate); *In the Matter of Application for Beneficial Water Use Permit No. 43B-30002710 by USDA* (DNRC Final Order 2005) (specific ditch segments would be adequate after completion of maintenance and rehabilitation work).

Adequate diversions can include the requirement to bypass flows to senior appropriators. E.g., *In the Matter of Application for Beneficial Water Use Permit No. 61293-40C by Goffena* (DNRC Final Order 1989) (design did not include ability to pass flows, permit denied).

79. Applicant has proven by a preponderance of the evidence that the proposed means of diversion, construction, and operation of the appropriation works are adequate for the proposed beneficial use. §85-2-402 (2)(b), MCA. (Findings of Fact Nos. 68-76).

### **Possessory Interest**

#### **FINDINGS OF FACT**

80. The applicant signed and had the affidavit on the application form notarized affirming the applicant has possessory interest, or the written consent of the person with the possessory interest, in the property where the water is to be put to beneficial use. (Department file)

#### **CONCLUSIONS OF LAW**

81. Pursuant to §85-2-402(2)(d), MCA, except for a change in appropriation right for instream flow to protect, maintain, or enhance streamflows to benefit the fishery resource pursuant to §85-2-436, MCA, or a temporary change in appropriation right authorization pursuant to §85-2-408, MCA, or a change in appropriation right to instream flow to protect, maintain, or enhance streamflows pursuant to §85-2-320, MCA, the Applicant must prove by a preponderance of the evidence that it has a possessory interest, or the written consent of the person with the possessory interest, in the property where the water is to be put to beneficial use or, if the proposed change involves a point of diversion, conveyance, or place of use on national

forest system lands, the applicant has any written special use authorization required by federal law to occupy, use, or traverse national forest system lands for the purpose of diversion, impoundment, storage, transportation, withdrawal, use, or distribution of water.

82. Pursuant to ARM. 36.12.1802:

(1) An applicant or a representative shall sign the application affidavit to affirm the following:

(a) the statements on the application and all information submitted with the application are true and correct; and

(b) except in cases of an instream flow application, or where the application is for sale, rental, distribution, or is a municipal use, or in any other context in which water is being supplied to another and it is clear that the ultimate user will not accept the supply without consenting to the use of water on the user's place of use, the applicant has possessory interest in the property where the water is to be put to beneficial use or has the written consent of the person having the possessory interest.

(2) If a representative of the applicant signs the application form affidavit, the representative shall state the relationship of the representative to the applicant on the form, such as president of the corporation, and provide documentation that establishes the authority of the representative to sign the application, such as a copy of a power of attorney.

(3) The department may require a copy of the written consent of the person having the possessory interest.

83. The Applicant has proven by a preponderance of the evidence that it has a possessory interest, or the written consent of the person with the possessory interest, in the property where the water is to be put to beneficial use. §85-2-402(2)(d), MCA. (Finding of Fact No. 80)

### **Salvage Water**

This Application does not involve salvage water.

### **PRELIMINARY DETERMINATION**

Subject to the terms and analysis in this Preliminary Determination Order, the Department preliminarily determines that this Application to Change Water Right No. 76N 30066124 should be granted subject to the following.

Applicant proposes to add two ponds as storage and secondary diversions for a sprinkler irrigation system for irrigation on 107.31 acres in the SE<sup>1</sup>/<sub>4</sub> of Section 14 and NE<sup>1</sup>/<sub>4</sub> of Section 23

all in Township 22N, Range 30W, Sanders County from Statement of Claim 76N 105405. Pond #1 will have a surface area of 0.08 acres and capacity of 0.16 AF and Pond #2 will have a surface area of 1.75 acres and a capacity of 7 AF. Irrigation diversion from the ponds will be reduced to a maximum volume of 155.14 AF. Conveyance to Applicant's place of use has not changed. Source of water will still be Mosquito Creek, which is located to the west of the place of use.

The change will also have the following condition:

THE APPROPRIATOR SHALL INSTALL A DEPARTMENT APPROVED MEASUREMENT DEVICE AT A POINT IN THE CONVEYANCE APPROVED BY THE DEPARTMENT. WATER MUST NOT BE DIVERTED UNTIL THE REQUIRED MEASURING DEVICE IS IN PLACE AND OPERATING. ON A FORM PROVIDED BY THE DEPARTMENT, THE APPROPRIATOR SHALL KEEP A WRITTEN *MONTHLY* RECORD OF THE FLOW RATE AND VOLUME OF ALL WATER DIVERTED, INCLUDING THE PERIOD OF TIME. RECORDS SHALL BE SUBMITTED BY JANUARY 31 OF EACH YEAR AND UPON REQUEST AT OTHER TIMES DURING THE YEAR. FAILURE TO SUBMIT REPORTS MAY BE CAUSE FOR REVOCATION OF A PERMIT OR CHANGE. THE RECORDS MUST BE SENT TO THE WATER RESOURCES REGIONAL OFFICE. THE APPROPRIATOR SHALL MAINTAIN THE MEASURING DEVICE SO IT ALWAYS OPERATES PROPERLY AND MEASURES FLOW RATE AND VOLUME ACCURATELY.

## NOTICE

This Department will provide public notice of this Application and the Department's Preliminary Determination to Grant pursuant to §85-2-307, MCA. The Department will set a deadline for objections to this Application pursuant to §§85-2-307, and -308, MCA. If this Application receives a valid objection, it will proceed to a contested case proceeding pursuant to Title 2 Chapter 4 Part 6, MCA, and §85-2-309, MCA. If this Application receives no valid objection or all valid objections are unconditionally withdrawn, the Department will grant this Application as herein approved. If this Application receives a valid objection(s) and the valid objection(s) are conditionally withdrawn, the Department will consider the proposed condition(s) and grant the Application with such conditions as the Department decides necessary to satisfy the applicable criteria. E.g., §§85-2-310, -312, MCA.

DATED this 28<sup>th</sup> day of August 2015.

/Original signed by Kathy Olsen/  
Kathy Olsen, Deputy Regional Manager  
Kalispell Water Resources Regional Office  
Department of Natural Resources  
and Conservation